

## USER-PORTABLE OBJECT-HOLDER

The present invention relates to a user-portable object-holder.

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Document US-A-4 274 571 describes a device that comprises two articulated jaws that can be brought together and closed so as to hold between them a pair of skis and poles placed parallel, this device being  
10 provided with a handle for carrying this assembly by hand. This device is not made in order to be attached to a user.

Document JP-A-10 178 196 describes a bottle-carrier  
15 that comprises a vertical base provided with two forks articulated between a position folded against the base and a horizontal position limited by a stop and in which it is possible to insert two spaced-apart regions of the bottle between their branches. An object-holder  
20 of this type will necessarily have to be placed such that positioning and removal of the bottle are easy.

Document CA-A-2 228 230 describes an object-holder that comprises a long sleeve attached horizontally to a  
25 belt, in which a bar provided at its end with a member for receiving an object is mounted telescopically. An object-holder of this type is not, in fact, practical to carry and may be carried only by someone making few movements.

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It is commonly found that, when one engages in leisure or sports activities such as walking, hiking, skiing or climbing, one is generally equipped with objects such as poles, ice axes, water bottles and other useful  
35 objects.

Nevertheless, it may be that one does not wish to use such objects, in which case it is customary for the

user, having no suitable means available to him, to store them in his backpack. He is then forced to remove this pack from his back and to put it back thereon every time he wishes to store objects or to take them  
5 out.

An object of the present invention is to improve the comfort of people who use the above-mentioned objects in particular.

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The object-holder according to the present invention comprises a support, fixing means enabling said support to be carried by a user, at least one arm mounted on said support so as to be mobile from a storage position  
15 and toward said storage position and having receiving means for at least part of at least one object, enabling said object to be carried and to be stored when said arm is in its storage position, and means for locking and holding said arm and/or said object carried  
20 by said arm when said arm is in said storage position.

According to one variant embodiment of the present invention said arm may be mounted pivotably on said support.

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According to one variant embodiment of the present invention said arm may be mounted slideably on said support.

30 According to the present invention said support and said arm preferably comprise complementary parts respectively, that couple together elastically when said arm is brought to said storage position.

35 According to the present invention said locking and holding means preferably comprise means for elastic coupling of said arm to said support.

According to the present invention said locking and

holding means preferably comprise means for elastic coupling of the object to said support.

5 According to the present invention said locking and holding means may advantageously comprise at least one fork, at least one branch of which is elastic in order to receive and to hold, elastically, between its branches, at least one part of said arm and/or of said object.

10 According to the present invention said receiving means may advantageously comprise at least one orifice or one passage for receiving at least one part of at least one object.

15 According to the present invention said receiving means may advantageously comprise at least one platform for receiving at least one object.

20 According to the present invention said receiving means may advantageously comprise means for elastic locking and holding of at least one object.

25 According to the present invention said support is preferably arranged on the user in such a position that said arm is articulated on said support on a vertical rod placed on the user's side, this arm extending rearward when it is in its abovementioned storage position and moving away from this storage position  
30 toward the side.

According to the present invention said fixing means preferably comprise means for fixing on a backpack.

35 The present invention will be better understood by studying an object-holder described by way of non-limiting example and illustrated by the drawing, in which:

- Figure 1 shows a view in elevation of an object-holder according to the invention, in the storage position;
- 5 - Figure 2 shows a section on II of the object-holder of Figure 1;
- Figure 3 shows a section on III of the object-holder of Figure 1;
- 10 - Figure 4 shows a plan view of the above-mentioned object-holder, in the moved-away position;
- Figure 5 shows a plan view of the above-mentioned  
15 object-holder, in the storage position;
- Figure 6 shows a view in elevation of the above-mentioned object-holder, in the moved-away position and carrying a pole;
- 20 - Figure 7 shows a view in elevation of the above-mentioned object-holder, in the storage position and carrying a pole;
- 25 - Figure 8 shows a front view of a user provided with the above-mentioned object-holder, in the moved-away position and carrying a pole;
- Figure 9 shows a side view of a user provided with  
30 the above-mentioned object-holder, in the moved-away position and carrying a pole;
- Figure 10 shows a side view of a user provided with the above-mentioned object-holder, in the storage  
35 position and carrying a pole; and
- Figure 11 shows a side view of a user provided with another object-holder according to the invention, in the storage position and carrying a container.

The object-holder 1 shown in Figures 1 to 10 comprises a plate-form support 2 that in the example shown is arranged substantially vertically and laterally vis-à-vis a backpack 3 carried by a user, bearing at the back and on the right side and at the level of the right hip of this user this support 2 having substantially the shape of a triangle, one side of which is at the bottom.

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The support 2 has passages and slots 4 suitable for being traversed, in a manner known per se, by straps 5 for fixing this plate to the backpack 3 and/or for fixing to the user by surrounding the latter's shoulder or to a belt.

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The lower side of the support 2 has, on its front part, distant from the backpack 3, a part 6 that projects laterally, determining, between two shoulder parts 7 and 8, a substantially vertical rod 9.

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The object-holder 1 also comprises a mobile arm 10, an end 11 of which is mounted in an articulated manner on the vertical rod 9, this end 11 having, for this purpose, a ring portion 12 such that the arm 10 can be mounted on the vertical rod 9, forcibly, by snap-fitting, the vertical rod 9 and the ring portion 12 generally constituting an articulation 10a.

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At its free end, the arm 10 has a receiving platform 13 traversed at its center by a vertical receiving hole 13a.

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Between its end 11 and its platform 13, the mobile arm 10 has, laterally, a projecting part 14 and, at the rear of its projecting part 6, the lower side of the support 2 has, projecting laterally, a fork 15 of which the branches 16 and 17, arranged one above the other and determining a corridor of C-shaped cross section,

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are adapted for receiving the projecting part 14 of the arm 10, forming elastic-coupling, locking and holding means.

5 In this way, the mobile arm 10 can pivot freely in a substantially horizontal plane and reach a rear storage position in which the projecting part 14 of the arm 10 is held elastically with the fork 15 of the support 2. In this storage position, the platform 14 of the mobile  
10 arm 10 is at a distance from the support 2 and at a distance from the side of the backpack 3, such that the space above this platform is free.

In its upper part, the support 2 has, extending  
15 laterally, a fork 18 of which the branches 19 and 20 are elastic and determine a vertical corridor 21 of C-shaped cross section, the ends of which have divergent edges 19a and 20a, this corridor 21 being substantially vertical vis-à-vis the hole 13a of the  
20 mobile arm 10 when the latter is in its above-mentioned storage position.

In order to carry an elongate object such as a pole 22, for example, a walking stick or a ski pole having a  
25 possibly telescopic shaft 23, a tip 24 and a handle 25 at the ends of this shaft, and a cup or basket 26 beyond said tip 24, the object-holder 1 may be used in the following manner.

30 As shown in Figures 4, 6, 8 and 9, the user places the mobile arm 10 in a position that is moved away from its above-mentioned storage position in which this arm 10 extends on his right side.

35 In his right hand, he takes the pole 22, places it vertically to the rear of his right arm and engages the tip 24 in the hole 13a of the mobile arm 10 from top to bottom, until the cup 26 bears on the platform 13 of the mobile arm 10.

Next, he pivots the mobile arm 10 rearward, holding the pole 22, until this arm 10 reaches its rear storage position and laterally engages the shaft 23 of the pole 22 between the branches 19 and 20 of the upper fork 18, this engagement being facilitated and guided by the edges 19a and 20a.

This having been done, as shown in Figures 5, 7, and 10, the pole 22 is held by virtue of the fact that its tip 24 is held in the hole 13a of the mobile arm 10, elastically locked by the coupling of the projecting part 14 of this arm in the fork 15 of the support 2, and by virtue of the fact that its shaft 23 is elastically locked in the upper fork 18 of the support 2.

In this way the user can then carry the pole 22 while keeping his hands free.

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In order to take hold of the pole 22 again, the user carries out the operations in the reverse order.

With his right hand, to the rear of his right hip, he takes the pole 22, possibly at the same time as the free end 13 of the mobile arm 10, and exerts a pulling force so as to extract the projecting part 14 of the arm 10 from the fork 15 of the support 2 and to extract the shaft 23 of the pole 22 from the upper fork 18 of the support 2.

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He then pivots the arm 10 forward and upwardly extracts the tip of the pole 22, which he can then once again use as he wishes.

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To finish, he pushes the arm 10 back as far as its above-mentioned storage position so that it can remain in its locked position and is not free.

With reference to figure 11, it is possible to see that this shows an object-holder 101, which forms a variant embodiment of the object-holder 1.

5 This object-holder 101 also comprises a plate-form support 102 and a mobile arm 110 articulated on the support 102 and adapted to occupy a storage position in the elastically locked state and to be moved away therefrom.

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In this variant embodiment, the free end of the arm 110 has an end platform 113 adapted to receive the lower part of a container 122, such as a water bottle, and the support 102 has a fork 118 having branches 119 and  
15 120 adapted to receive laterally between them and to elastically lock the body of the container 122 when the arm 110 is brought into its above-mentioned storage position.

20 An object-holder 101 of this type can be used just like the object-holder 1 described above.

The object-holders 1 and 101 just described are adapted in order to be manufactured, preferably from plastics.  
25 They have shapes and reinforcement areas resulting from the customary use of such a material. Their shapes and in particular their passages, forks and fixing slots are produced and arranged in order to obtain satisfactory holding of their support and satisfactory  
30 holding of the objects in the storage position.

The present invention is not restricted to the examples described above.

35 Although described and shown in association with a backpack, the object-holder could be adapted for carrying on its own. In this case, the fixing straps could comprise a belt.



Furthermore, the object-holder could have been carried on the left side of a user. In such a case, it would have a structure that is the mirror image of the one described and shown.

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Furthermore, a user could carry an object-holder on the left and an object-holder on the right with a view to carrying identical or different objects.

- 10 Also, one and the same object-holder could be adapted to carry a plurality of identical or different objects or objects connected together.

- 15 The mobile arm could have any form adapted to receive and/or to hold any part of a particular object other than those mentioned in the examples, and the support could have any form adapted to receive and/or to hold any part of such an object.

- 20 The mobile arm described and shown as pivoting could have been provided so as to slide relative to the support.

- 25 Many other variant embodiments are possible, particularly in terms of the link between the mobile arm and the support and the means for locking the mobile arm and/or the object in the storage position.

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